



# CHARDAN

**Company Update**

June 12, 2019

Industrial & Consumer Technology

## 22nd Century Group, Inc. (XXII - \$2.00 - Buy)

## COMPANY NOTE

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**Sales and trading** 7 a.m. to 7 p.m. ET, (646) 465-9090

**Sales and trading** 7 p.m. to 7 a.m. ET, (646) 465-9063

Stock Data	06/11/19
Price	\$2.00
52 Week Range	(\$1.58 - \$3.29)
Price Target	\$11.50
Market Cap (mil)	\$249.29
Shares out (mil)	124.64
3-Mo Avg Vol	1,440,204
Cash (mil)	\$51.9
Total Debt (mil)	\$1.5

Revenues (\$ millions)					
Yr Dec	2018A	2019E		2020E	
	Actual	Curr	Prev	Curr	Prev
YEAR	26.4	21.3	-	21.3	-

EPS (\$)					
Yr Dec	2018A	2019E		2020E	
	Actual	Curr	Prev	Curr	Prev
YEAR	(0.06)	(0.15)	-	(0.18)	-
			-		-

### One year price history XXII



## XXII (Buy, PT\$11.50). Still Waiting for FDA Action

Shares of 22nd Century have been trading water over the past few months as the market awaits progress on the company's PMTA and MRTP applications with the FDA as well as action by the FDA on an NPRM to mandate non-addictive levels of nicotine in combustible cigarettes. We believe movement on all three of these items is likely before year-end, but action by government entities is often delayed and out of the company's control. To mitigate the timing risk of FDA action, the company has taken modest initiatives in the hemp market that could provide catalysts for the shares this year. We believe additional investments by 22nd Century in this market is likely.

The company continues to work with the FDA on its PMTA and MRTP applications and waits for further movement from the FDA on an NPRM to mandate non-addictive nicotine levels in combustible cigarettes. The FDA has completed inspection of the company's manufacturing facility in North Carolina, the third phase of a four phase process to evaluate 22nd Century's PMTA (pre-market tobacco application) for a very-low nicotine cigarette. Shortly after the PMTA was filed in December of 2018, 22nd Century filed an MRTP, Modified Risk Tobacco Product application requesting authorization to claim on packaging and in advertising that its cigarettes contain 0.5mg of nicotine per gram of tobacco. Applications are supposed to be evaluated in 180 days, but questions from the FDA and amendments submitted by the petitioner can extend that time considerably.

We believe these applications will be an important tool the FDA can use to justify and support the NPRM we expect to be issued. The FDA has been consistent and clear that it wants to implement a rule that would lower nicotine in combustible cigarettes to non-addictive levels. One major objection industry has made is a claim that technology is not available to accomplish this objective. Approval of 22nd Century's PMTA and MRTP would counter this objection and justify the FDA's rule change.

As the FDA moves down the path of mandating non-addictive levels of nicotine in cigarettes, 22nd Century could have a large time-to-market advantage over current providers in the market as well as demonstrate it has technology available others need to comply with the very-low nicotine mandate.

There is tremendous institutional momentum in the FDA's decade's long endeavor to reduce cigarette smoking. While the NPRM has been delayed due to the recent resignation of FDA Commissioner Gottlieb, we expect the process to move forward this year.

The company is investing in the hemp market. XXII recently entered into a collaboration and research agreement with Natural Good Medicines (NGM) that calls on NGM to process hemp and cannabis plant lines owned by NGM. 22nd Century has certain exclusive rights to NGM's plant lines. Also, 22nd Century entered into a worldwide R&D agreement with KeyGene, that will focus on developing hemp and cannabis plants with specific medical and therapeutic profiles. KeyGene is an AgBiotech company that specializes in crop improvement using molecular breeding. KeyGene believes this is the fastest and most cost-effective path to market for specialized crops.

In exchange for \$6 million over the initial five year term, KeyGene will work exclusively with 22nd Century on the Cannabis Sativa L. plant and will work specifically to create a genetic database, develop improved varieties, create a molecular genetic map of the cannabis plant genome, analyze the genomic sequences of multiple species of hemp/cannabis plants and initiate generation of plant lines with distinctive profiles. This is still early days for 22nd Century and the hemp market but it could generate considerable value as the hemp market grows.

The company has \$52 million in cash, or almost 4 years of cash at the company's current burn rate. However, investments in the hemp market will lower the company's cash balances modestly and we think a substantial cash balance is necessary in order to combat the likely delaying tactics of the tobacco industry when rule changes are implemented by the FDA.

**Valuation:**

Our twelve-month price target of \$11.50 is based on the company garnering royalty revenue for its technology on 10% of the US market share in the next five years, discounted at a 20% annual rate.

**Risks to achievement of target price:**

Risks to achieving our price target include delays in the FDA process, ability to find partners for X-22, challenges in attracting contract manufacturing and selling product overseas and possibility of requiring additional capital.

**Company description:**

22nd Century owns or exclusively controls over 200 issued patents, 50 pending patent applications. The company's proprietary technology enables the control of nicotine levels in tobacco plants by controlling the genes responsible for nicotine production in tobacco plants.

## Required Research Disclosures



Created by: BlueMatrix

### Distribution of Ratings/IB Services Chardan Capital Markets

Rating	Count	Percent	IB Serv./Past 12 Mos.	
			Count	Percent
BUY [BUY]	68	72.34	17	25.00
HOLD [NEUTRAL]	25	26.60	1	4.00
SELL [SELL]	0	0.00	0	0.00
NOT RATED [NR]	1	1.06	0	0.00

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#### RATINGS

**Buy:** Expected to materially outperform sector average over 12 months and indicates total return of at least 10% over the next 12 months.

**Neutral:** Returns expected to be in line with sector average over 12 months and indicates total return between negative 10% and 10% over the next 12 months.

**Sell:** Returns expected to be materially below sector average over 12 months and indicates total price decline of at least 10% over the next 12 months.

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Price Target \$11.50

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#### RISKS TO ACHIEVEMENT OF TARGET PRICE:

Risks to achieving our price target include delays in the FDA process, ability to find partners for X-22, challenges in attracting contract manufacturing and selling product overseas and possibility of requiring additional capital.

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